## Croatian Validation of Tws and Predictors of Tourist Psychological Well-Being

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This study aimed to validate the Croatian version of the Tourism Well-being Scale (Tws) and identify potential predictors of tourist psychological well-being. Grounded in the theoretical framework of the HOPE (Human Optimal Psychological Experiences) model, the Tws measures psychological well-being resulting from touristic activities and experiences. Four hundred Croatian-speaking adults participated in the study via Google Forms, completing the Tws, a sociodemographic questionnaire, the Flourishing Scale, the Purpose in Life test, and the Big Five Inventory (BFI). Confirmatory factor analysis initially revealed a suboptimal fit of the original one-factor model of the Tws to the data. However, the one-factor model was confirmed through modifications proposed by the scale authors. The Tws demonstrated internal consistency and congruent validity, manifesting positive correlations with meaning in life and flourishing. Examining measurement invariance across biological sexes underscored the scale's configural, metric, and scalar invariance. Regarding predictors of tourist psychological well-being, hierarchical regression analysis indicated that extraversion and openness have positive, and neuroticism

analysis indicated that extraversion and openness have positive, and neuroticism negative effects on tourist psychological well-being. Additionally, forms of tourism such as retreats, volunteer activities, charity engagements, or visits to slums significantly positively affected tourists' psychological well-being. Age, agreeableness, and conscientiousness did not significantly predict tourist psychological well-being. This research advances tourism studies by emphasizing the importance of validating tourist-related scales across various cultural and linguistic settings. Doing so promotes the creation of reliable measurement instruments, enabling better comparisons of psychological well-being among tourists from diverse backgrounds. Also, identifying predictors of tourist psychological well-being gives essential directions for further research in the hospitality industry.

*Keywords*: Tourism Well-being Scale, validation, measurement invariance, predictors, multiple regression analysis

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## Introduction

Despite its significant impact on tourist satisfaction and destination loyalty (Al-okaily et al., 2023), psychological well-being is an under-researched topic in tourism studies (Filep, 2014). Constructing and validating instruments related to psychological well-being in tourism is crucial for advancing research in this area. Validating an instrument in different language and cultural contexts is essential because instrument understanding and psychometric properties can vary across populations (Campo-Arias & Pineda-Roa, 2022). Moreover, such validation is fundamental for conducting cross-cultural research and comparing findings across different contexts.

The current study aims to validate the Tourist Well-being Scale (TWS; Garcês et al., 2020) in a Croatian sample. The TWS is a self-assessment measure designed to evaluate well-being associated with tourism experiences at various destinations (Garcês et al., 2018). While the original validation research of the Tws demonstrated construct and congruent reliability and high internal consistency, the measurement invariance of the scale was not tested. This research aims to evaluate the measurement invariance of the TWS across male and female participants, thereby ensuring that the scale measures the construct of tourist well-being equivalently across biological sexes. This validation will contribute to the robustness of the TWS and enhance its applicability in diverse cultural and linguistic settings, ultimately facilitating more comprehensive and comparative research in tourism--related psychological well-being.

The second goal of this research is to enhance the limited knowledge of psychological well-being resulting from tourism experiences by examining various predictors of tourists' psychological well-being. As a general construct, psychological well-being is best predicted by personality traits, particularly neuroticism and extraversion (Landa et al., 2010). Results consistently show that individuals with low neuroticism and high extraversion tend to have higher psychological well-being (Gale et al., 2013). While personality traits are the strongest predictors of psychological well-being, some sociodemographic factors, like age, also play an important role in predicting psychological well-being (Momtaz et al., 2011). This study will examine the impact of the Big Five personality traits and participants' age on psychological well-being resulting from tourism experiences. Finally, since different tourism forms and activities promote different aspects of tourist well-being, and given that previous research (Smith & Diekmann, 2017) has linked certain forms of tourism, such as retreats, volunteer activities, charity engagements, or visits to slums, with psychological well-being, the

predictive value of such tourism forms in the context of tourist psychological well-being will also be examined.

## Literature Review

## Psychological Well-Being

Research on well-being has grown significantly in recent decades (Dodge et al., 2012). Early studies by Diener (1984) introduced the concept of subjective well-being, focusing on individuals' self-reported happiness and life satisfaction. Later, psychological well-being models, such as those proposed by Ryff (1989), Ryan and Deci (2000), and Seligman (2011), expanded the understanding of well-being to include multiple dimensions of human actualization and fulfilment. Ryff's (1989) model posits that psychological well-being is a multidimensional construct composed of six aspects of human actualization: self-acceptance, personal growth, purpose in life, autonomy, environmental mastery, and positive relations. The latter three dimensions are central to the self-determination theory (Ryan & Deci, 2000), which asserts that psychological well-being results from satisfying three fundamental psychological needs: relatedness (positive relations), autonomy, and competence (environmental mastery). Seligman's PERMA model (2011) is also frequently employed in assessing psychological well-being (Han et al., 2022). PERMA stands for positive emotions, engagement, relationships, meaning, and accomplishment. While it is primarily a model of psychological well-being, it also incorporates elements traditionally associated with subjective well-being, such as positive emotions.

In tourism studies, psychological well-being is rarely the focus. Research in this field often assesses tourists' subjective well-being by assessing their satisfaction with travel experiences (Bader et al., 2023) and emotional responses to tourism experiences (Janchai et al., 2020). However, subjective well-being is insufficient to fully explain the meaning and value tourists find in tourism. This gap can be addressed only by examining tourists' psychological well-being (Han et al., 2022). Despite the necessity to shift perspective from a subjective to a psychological perspective, only a few tourism studies have studied psychological well-being (Filep, 2014). One possible reason for such a lack of scientific interest in tourists' psychological well-being might be the absence of psychological well-being measures to assess this part of well-being. To advance this field, developing and validating psychological well-being measures designed especially for the tourism context is essential (Piuchan & Suntikul, 2016).

## TWS (Garcês et al., 2020)

One instrument that measures psychological well-being as a product of touristic activities and experiences is the Tourist Well-being Scale (Tws) developed by Garcês et al. (2020). Recent tourism research has employed the Tws to measure tourist well-being (Magano & Leite, 2021; Magano et al., 2022). However, besides the original Tws validation study (Garcês et al. 2020), no other research has validated this instrument in other language and cultural contexts. Once a scale is constructed, validating it in different languages is important for ensuring its relevance to different cultures, making them more accessible, and allowing researchers to compare results across cultures (Hambleton et al., 2005).

The TWS is grounded in the theoretical framework of the HOPE model (Human Optimal Psychological Experiences), introduced by Garcês et al. in 2017. The HOPE model is based on the PERMA model of well-being (Seligman, 2011). The HOPE model (Garcês et al., 2017) proposes that in the context of tourism, psychological well-being is influenced by both personal and situational factors. Personal factors include creativity, optimism, and spirituality, which interact with the specific situations and experiences encountered at a tourist destination to mould overall psychological well-being.

To illustrate the interaction of personal factors, tourist experiences, and psychological well-being, picture a tourist exploring a historic city renowned for its architectural wonders. Rather than adhering strictly to a guidebook, a creative tourist might wander through the city streets with a sketchbook, capturing the details of buildings. Engaging in creative activities during travel positively impacts psychological wellbeing (Huang et al., 2020) by fostering engagement. So, the relationship between creativity and tourist psychological well-being could be mediated by engagement. In other words, a single tourist experience or visit can enhance psychological well-being by fostering positive emotions, engagement, and a sense of meaning in alignment with the principles outlined in the PERMA model (Seligman, 2011). The TWS in the original validation study showed good psychometric characteristics (Garcês et al., 2020). Both construct and congruent validity, as well as reliability, were established. However, the authors (Garcês et al., 2020) noted that further validation research is necessary to continue developing this measure.

## Predictors of Tourist Psychological Well-Being

Numerous factors influence psychological well-being, which can vary significantly across different settings. Individual factors such as personality traits, especially the Big Five personality traits, have shown moderate to strong correlations with psychological well-being measures. Extraversion, openness, agreeableness, and conscientiousness showed positive, and neuroticism negative correlations with psychological well-being measures (Anglim et al., 2020). In terms of sociodemographic factors, age appears to be an exception. Research suggests that younger individuals tend to report higher levels of psychological well-being. However, other sociodemographic factors generally have a limited impact on psychological well-being (Pourebrahim & Rasouli, 2019).

Despite the extensive research on predictors of psychological well-being in general settings, there is a notable gap in studies focusing on predictors of psychological well-being resulting from a tourism experience. One of the recent studies in this field (Smith & Diekmann, 2017) revealed that certain tourism activities and forms may predict tourists' psychological well-being, namely forms of tourism such as retreats, volunteer activities, charity engagements, or visits to slums. This finding is in line with the previously mentioned HOPE model (Garcês et al., 2017), which postulates that activities developed in the tourist destination could influence tourists' psychological well-being by raising their creativity, optimism, and spirituality.

Scale item	Scale items in Croatian	Well-being dimension
I was able to see the positive side of the less agreeable situations that occurred.	Uspio/la sam vidjeti pozitivnu stranu manje ugodnih situacija koje su se dogodile.	Optimism
I have discovered new ways of being that have brought meaning to different aspects of my life.	Otkrio/la sam nove načine postojanja koji su dali smisao različitim aspektima moga života.	Meaning
I had lots of fun.	Jako sam se zabavio/la.	Positive emotions
I faced this experience as a unique/original opportunity.	Pristupio/la sam ovom iskustvu kao jedinstvenoj/izvornoj prilici.	Creativity
I engaged in the community activities (cultural, events, etc.)	Sudjelovao/la sam u aktivnostima zajednice (primjerice kulturalnim događajima).	Engagement
This experience was a dream come true.	Ovo iskustvo je bilo ostvarenje sna.	Accomplishment
I experienced a connection/relationship with something higher than myself.	Doživio/la sam vezu/odnos s nečim višim od sebe.	Spirituality
I felt good in the relationship I developed with new people.	Osjećao/la sam se dobro u odnosima koje sam uspostavio/la s novim ljudima.	Positive relationships

Table 1 Tws Scale Items and Well-Being Dimension They Refer To

When faced with an open question like identifying the predictors of tourist psychological well-being, the first step is to identify potential groups of predictors and then test their subsequent effects on tourist psychological well-being.

## Method

## Sample Design

Data collection was conducted online using a Google Forms questionnaire. While online data collection has several advantages, it also presents limitations, such as sample representativeness, response credibility, and potential survey dropout (Žmuk, 2019). To address these limitations, a purposive sampling strategy was used to ensure a diverse sample of age, sex, education, and socioeconomic status. Participants were recruited through social media and online community forums. The survey was designed to be concise and engaging, with mandatory responses to ensure completeness and minimize dropout rates. Participants were informed about the study's purpose, voluntary participation, and data anonymity. Participation in the survey was available from February to May 2022.

#### Instruments

## Tourist Psychological Well-Being

Participants received the following instructions before completing the scale: 'The purpose of this scale is to evaluate your last tourist experience. There are no correct or incorrect answers; how you perceive your last tourist experience matters. Your responses are anonymous and confidential. For each statement, please indicate your level of agreement on a 7-point scale, where 1 indicates total disagreement, 2 disagreement, 3 partial disagreement, 4 neutrality, 5 partial agreement, 6 agreement, and 7 total agreement.

#### Personality Traits

The Big Five personality traits (extraversion, openness, neuroticism, agreeableness, and conscientiousness) were assessed using the BFI (Big Five Inventory) (Benet-Martinez & John, 1998) questionnaire. Extraversion and neuroticism were measured using eight items each, agreeableness and conscientiousness with nine items, and openness with ten items. Participants rated their agreement with each item on a 5-point Likert scale (1 – strongly disagree, to 5 – strongly agree). The score for each subscale is calculated as the average of all the items within that subscale. The items were formulated as short phrases derived from prototypical adjectives representing the traits of the five-factor model. The questionnaire was translated into Croatian and validated by Kardum et al. (2006), who confirmed that the five-factor model fits the data well.

## Psychological Flourishing

The Croatian version (Rijavec et al., 2016) of the Flourishing Scale (FS) (Diener et al., 2009) was used to evaluate participants' psychological flourishing. The Fs includes eight items designed to capture individuals' perceived success in significant life domains such as relationships, self-esteem, purpose, and optimism. Participants are instructed to indicate their level of agreement with each statement using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Scores range from 7 to 56, with higher scores indicating greater psychological flourishing.

## Meaning in Life

Meaning in life was assessed using the Croatian version of the Purpose of Life Test, adapted by Vulić-Prtorić and Bubalo (2006). The Meaning of Life Scale consists of 23 statements measuring emotional and cognitive aspects of purpose in life. Participants rated their agreement with each statement on a 5-point Likert scale. Scores range from 23 to 115, with higher scores indicating greater meaning in life.

## **Tourist-Related Factors**

To assess the nature of participants' most recent tourist experience, a single question with a dichotomous response (yes/no) was utilized. Participants were asked if their last tourist experience involved retreats, volunteer work, charitable engagements, or slum visits.

#### Data Analysis

All statistical analyses were conducted using R (R Core Team, 2016). First, confirmatory factor analyses (CFA) were used to establish the factor structure of TWS, and other scales used in research. CFA enables testing how well data fits a hypothesized measurement model, confirming the scale's construct validity. Maximum likelihood estimation with robust standard errors was used, which accounts for any possible

deviations from normality, providing robust estimates. Regarding the TWS, the model fit of two structures was compared: the one-factor model and the one--factor model with modifications suggested by the authors of the original scale. Modifications included correlations between error terms for the several item pairs. The previously established one-factor structure of the FS (Tadić-Vujčić et al., 2017) and Meaning in Life Scale (Vulić-Prtorić & Bubalo, 2006), and the five-factor structure of BFI were also tested (Kardum et al., 2006). Model fit was considered acceptable if the Tucker-Lewis Index (TLI) and comparative fit index (CFI) were both  $\geq$  0.90, the root mean square error of approximation (RMSEA) was  $\leq$  0.08, and the standardized root mean square residual (SRMR) was  $\leq$  0.10 (Little, 2013). Biological sex was chosen for invariance testing of the TWS to ensure the scale measures the same construct equivalently across male and female participants. Models that examine the relationships between observed variables and underlying latent factors are known as measurement invariance tests. Three standard measurement invariance models were tested: configural invariance, metric invariance, and scalar invariance (Milfont & Fischer, 2010). The configural model tests whether participants from different groups conceptualize the constructs similarly, meaning that the basic model structure is the same across groups. If the configural invariance is obtained, the next step is determining if different groups respond similarly to the items, specifically examining whether the relationships between scale items and their corresponding latent construct are consistent across groups (metric invariance). Finally, to compare latent means, scalar invariance is necessary. Scalar invariance suggests that individuals with identical scores on the latent construct will achieve the same score on the observed variables, regardless of their group membership (Milfont & Fischer, 2010). The criteria for accepting measurement invariance were set at  $\Delta CFI \leq |0.010|$  and  $\Delta SRMR \leq |0.015|$  (Chen, 2007).

The reliability of the TWS was assessed with interitem correlations ( $\geq$  0.5) and Cronbach's alpha coefficient, with a criterion value of > 0.70 for acceptable consistency (DeVellis, 2003). Reliability was assessed

	TWS	М	SD	Skewness	Kurtosis
Meaning in life	0.36**	84.32	16.03	-1.21	-0.48
Psychological flourishing	0.60**	43.52	5.52	2.31	0.32
TWS	-	34.4	8.25	-0.58	0.08
Agreeableness		3.58	0.69	-0.45	0.17
Extraversion		3.40	0.86	-0.34	-0.56
Neuroticism		2.78	0.89	0.32	0.27
Openness		3.7	0.73	-0.48	-0.12
Conscientiousness		3.66	0.73	-0.50	0.27
Age		33.3	11.4	1.9	1.31
Note **p < 0.01					

 Table 2
 Pearson Correlation Coefficients Between Tws and Measures of Congruent Validity, and Descriptive Statistics of Continuous Study Variables (N = 400)

solely with Cronbach's alpha for the other scales, which had already been validated in Croatian samples. The congruent validity of the TWS was evaluated by calculating Pearson correlation coefficients with measures of meaning in life and psychological flourishing, with expected positive correlations between TWS and these measures. Hierarchical regression analysis was used to assess the unique contribution of sociodemographic variables, Big Five personality traits, and tourist forms in explaining tourist psychological wellbeing. This method was chosen because it allows the analysis of the effect of predictor variables after controlling for other variables, thus helping to determine the incremental validity of each block of variables (Lewis, 2007).

No missing data were identified in the study variables, as the questionnaire format required responses to every question.

#### Results

## Sample Description

The required sample size was determined *a priori* using G\*Power software. Based on a medium effect size (f2) of 0.15, an alpha error probability of 0.05, a power of 0.8, and a model containing seven predictors, the total sample size required for the study was 103 participants. The final sample consisted of 400 adult participants whose native language is Croatian. The majority of the sample comprised females (71%). The

age range of participants was from 18 to 83 years. The average age of the participants was 33 years (SD = 11). Regarding educational level, 30% of the sample had a high school diploma, 23% held a bachelor's degree, 38% held a master's degree, and 9% held a PhD. The majority of participants reported a middle socioeconomic status (68%). In comparison, 24% reported a high socioeconomic status, and 8% reported a low socioeconomic status. 61% of participants declared that their last tourism experience involved activities such as retreats, volunteer work, charitable engagements, or visits to slums.

## **Descriptive Statistics and Congruent Validity**

Table 2 presents descriptive statistics of the continuous study variables. Tws was positively correlated to meaning in life and psychological flourishing. Additionally, all variables in the study meet the criteria for normal distribution, as indicated by skewness and kurtosis values within acceptable ranges according to Kline's criteria (2011).

#### **Reliability Analysis**

All scales demonstrated strong internal consistency, as indicated by Cronbach alpha values of 0.9 for the Meaning in Life Scale, 0.89 for the Flourishing Scale, 0.87 for extraversion, 0.85 for openness, 0.88 for neuroticism, 0.78 for agreeableness, and 0.84 for conscientiousness. The Tws also showed high internal

# Table 3Inter-Item Correlations, Overall Scale Reliability<br/>(Cronbach's Alpha), and Item Deletion Analysis<br/>of Cronbach's Alpha Coefficients for the TWS,

Item	r <sub>it</sub>	$\alpha$ if item deleted
1	0.664	0.836
2	0.792	0.817
3	0.689	0.832
4	0.714	0.830
5	0.619	0.846
6	0.787	0.818
7	0.684	0.841
8	0.702	0.830

Cronbach's  $\alpha$  for the whole scale 0.849

N = 400

consistency with a Cronbach alpha value of 0.85 (Table 3). Furthermore, the inter-item correlations (rit) in Table 3 indicate high relationships between each Tws item and the rest of the scale, suggesting strong inter--item associations ranging from 0.619 to 0.792. As the table shows, removing any item would not significantly improve the scale's internal consistency reliability.

## Confirmatory Factor Analysis (CFA)

Confirmatory factor analyses of all scales used in research are presented in Table 4. The one-factor model of the TWS exhibited an acceptable CFI value; however, the TLI fell slightly below the acceptable threshold. The RMSEA surpassed the recommended limit of  $\leq$  0.08, suggesting a suboptimal fit. Conversely, the SRMR fell within the acceptable range. Despite the acceptable CFI and SRMR values, the elevated RMSEA and marginally lower TLI imply an inadequate overall fit of this model. In contrast, as proposed in the original study, the one-factor model of the TWS with modifications demonstrated a favourable fit to the data across all utilized fit indices. Furthermore, all items exhibited statistically significant and high factor loadings onto the presumed factor, ranging from 0.51 to 0.90 (p < 0.01), as illustrated in Figure 1.

The one-factor model of the Meaning in Life Scale demonstrated an acceptable CFI and slightly below the threshold TLI value. The RMSEA and SRMR fell within the acceptable range, suggesting a good fit to the data overall. The one-factor model of the Flourishing Scale demonstrated acceptable CFI, TLI, and SRMR values, with RMSEA higher than acceptable. However, with simple models with few degrees of freedom, RMSEA tends to increase (Kline, 2011), so the overall model fit was deemed acceptable for the Flourishing Scale. Finally, the five-factor model of the BFI scale showed a poor fit to the data, with CFI and TLI values below the threshold and RMSEA and SRMR values above the acceptable threshold. Despite poor CFA results, the BFI is a widely used instrument across different populations, demonstrating its overall reliability and validity (John & Srivastava, 1999; Soto & John, 2017). Personality traits' complexity can lead to model fit issues, but alternative methods like EFA often support the BFI structure (Marsh et al., 2010). Additionally, the BFI shows strong reliability and criterion validity in various contexts, reinforcing its utility despite CFA limitations (John & Srivastava, 1999; Soto & John, 2017).

## Measurement Invariance of the TWS

Results presented in Table 5 indicate that the configural, metric, and scalar invariance between male and female participants were observed, with the difference in CFI and RMSEA below the standard thresholds (Chen, 2007).

## Hierarchical Linear Regression

Table 6 presents the results of the hierarchical regression analysis for tourist psychological well-being as the criterion variable, with the age, personality traits, and forms of tourist experiences as separate blocks of predictor variables.

No significant contribution of age to tourist psychological well-being was found. After controlling for age, the second block of variables consisted of the Big Five personality traits, which significantly increased the proportion of explained variance in tourist psychological well-being by an additional 23%. Specifically, a significant independent contribution of extraversion ( $\beta = 0.228$ ), openness ( $\beta = 0.263$ ), and neuroticism ( $\beta = -0.133$ ) were found. The results indi-

	X2(df)	CFI	TLI	RMSEA [90%CI]	SRMR
One-factor model (Tws)	11.344(20)**	0.905	0.867	0.119 (0.098–0.141)	0.055
One-factor model with modifications (TWS)	32.518(12)**	0.978	0.950	0.073 (0.044–0.104)	0.032
Five factor model (BFI)	3487.762 (892)**	0.654	0.633	0.095 (0.092–0.098)	0.112
One-factor model (Meaning in Life Scale)	810.237 (230)**	0.902	0.848	0.08 (0.079-0.085)	0.055
One-factor model (FS)	135.410 (20)**	0.907	0.900	0.134 (-113-0.156)	0.045
<b>J.T.</b> 4.4					

*Table 4* Measurement Models, N = 400

Note \*\*p < 0.01

cate that individuals who are higher in extraversion and openness are more prone to experiencing tourist psychological well-being. In contrast, those higher in neuroticism are less likely to experience tourist psychological well-being. After controlling for age and personality traits, the third block of variables consisted of different forms of tourist experiences, which significantly increased the proportion of explained variance in tourist psychological well-being by an additional 5%. Participation in retreats, volunteer activities, charity engagements, or visits to slums significantly positively affected psychological well-being. The final regression equation shows that this set of predictor variables (age, Big Five personality dimensions, and forms of tourist experiences) can explain 28% of the variance in tourist psychological well-being.

#### Discussion

This research had two main goals. First, it aimed to translate, adapt, and validate the Tourism Well-being Scale (Tws) on a Croatian sample. Second, it aimed to identify predictors of tourist psychological well-being.

Regarding the first goal, the present research confirms that the Tws has a consistent factor structure with the original version by Garcês et al. (2020). Initially, the one-factor model showed a poor fit, but the model reached an acceptable fit after allowing error correlations between certain items (Table 4), a standard practice in CFA (Brown, 2015). The scale demonstrated satisfactory internal consistency (Table 3), with the Cronbach's alpha value exceeding the recommended 0.70 threshold (DeVellis, 2003). The scale also showed congruent validity through positive correlations with psychological flourishing and mea-



Figure 1 Factor Structure and Loadings of all TWS Items

	CFI	SRMR	$\Delta$ cfi	$\Delta$ srmr
CI <sup>1</sup>	.989	.031		
MI <sup>2</sup>	.988	.035	.001	.004
SI <sup>3</sup>	.983	.039	.005	.004

 Table 5
 Measurement Invariance Testing of the TWS

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 Dialog

Note сі – configural invariance; мі – metric invariance; sı – scalar invariance

Table 6Results of the Hierarchical Regression AnalysisWith Criterion Variable Tourist Psychological Well-Being,N = 400

Pr	redictors	1. ( <i>β</i> )	2. ( <i>β</i> )	3. ( <i>β</i> )
1.	Sociodemographics			
	Age	0.09	-0.023	
2.	Personality traits			
	Extraversion		0.228**	0.205**
	Agreeableness		0.064	0.109
	Conscientiousness		-0.021	-0.029
	Openness		0.263**	0.252**
	Neuroticism		-0.133**	-0.144**
3.	Tourist-related factors			
	Tourist form <sup>a</sup>			0.204**
	$\Delta R^{2b}$		0.23**	0.046**
	R <sup>2c</sup>	0.008	0.238**	0.284**

*Notes* <sup>a</sup> Tourist form: 2 = retreats, volunteer activities, charity engagements, visits to slums; 1 = other forms of tourism; <sup>b</sup>  $\Delta R^2$  = the contribution of an individual group of predictors to the explained variance; <sup>c</sup>  $R^2$  = the total contribution of predictors to the explained variance.

ning in life (Table 2). Thus, it can be concluded that Tws is a valid and reliable instrument in the Croatian context. Furthermore, this is the first research to test the scale's measurement invariance, demonstrating that the Tws has configural, metric, and scalar invariance across biological sexes (Table 5).

The study also examined predictors of tourist psychological well-being, drawing hypotheses from general psychological well-being research (Pourebrahim & Rasouli, 2019; Anglim et al., 2020). The results showed that age did not significantly affect tourists' psychological well-being, contradicting previous findings that younger individuals report higher psychological well-being (Pourebrahim & Rasouli, 2019). This suggests that the benefits of tourist experiences on psychological well-being may be universal across different age groups, highlighting tourism's potential as a broadly effective intervention for enhancing psychological well-being. The significant contributions of Big Five personality traits align with existing literature, where extraversion and openness positively predict psychological well-being, while neuroticism negatively predicts it (Joshanloo, 2023; Anglim et al., 2020).

Extraverted people are sociable and optimistic (Costa & McCrae, 1992). They might enjoy travel and benefit from it due to its social and exploration components, which aligns with research done by Alves et al. (2023). Open individuals, inclined to experience new stimuli with curiosity and willing to try novel activities (Costa & McCrae, 1992), are drawn to diverse tourism motivations. These motivations include experiencing new and different things, fostering self-development, and seeking relaxation and bonding experiences (Alves et al., 2023). Such activities enhance their psychological well-being by providing intellectual stimulation, emotional engagement, and meaningful social interactions (Hooker et al., 2019). Conversely, individuals with high neuroticism, who are more prone to stress and negative emotions (Costa & McCrae, 1992), may find the uncertainties and potential challenges of tourism less beneficial to psychological well-being. Agreeableness and conscientiousness, although fundamental personality traits with significant implications for various life domains, such as physical health (Siegler et al., 2003), academic (Lounsbury et al., 2003), and occupational domain (Sutin et al., 2009) do not seem to influence tourist psychological well-being substantially.

Furthermore, this research shows the importance of specific tourist experiences in facilitating tourist psychological well-being. Participating in retreats, volunteer activities, and charity engagements enhances psychological well-being, supporting Smith and Diekmann's (2017) findings that meaningful engagement and altruistic behaviour are associated with greater psychological well-being. Consequently, not all tourist experiences are equal; deeper, meaningful interactions and altruistic behaviour in travel destinations may benefit tourists' psychological well-being.

#### Conclusion

To conclude, the TWS exhibited reliability, congruent, and construct validity. It also demonstrated configural, measurement, and scalar invariance across biological sexes. The results of hierarchical regression analysis revealed that extraversion and openness positively predict tourist psychological well-being, while neuroticism negatively impacts it. Some tourism activities, like retreats or volunteer engagements, also increase tourists' psychological well-being.

This study has several scientific contributions. Firstly, it showed that the TWS is a valuable and reliable tool for assessing tourist psychological well-being in Croatian samples. Researchers can now use this tool as a reliable measure of Croatian tourists' psychological well-being, which adds to and enhances the scale's applicability in cross-cultural research. Secondly, this research identified key personality traits and specific tourism activities that impact tourists' psychological well-being. These findings add to the growing body of literature on the effects of tourism on well-being and provide practical insights for the tourism industry. For instance, promoting activities such as retreats and volunteer engagements can significantly boost tourists' psychological well-being, making them more likely to revisit and recommend the destinations.

Some limitations of this research should be noted. The study aimed to identify predictors of psychological well-being due to tourism experiences but used a cross-sectional design, thus limiting the predictive power of identified predictors. Another limitation regarding predictors of tourist psychological wellbeing is the binary response form of the question related to different touristic forms and activities. Future studies should use a variety of touristic activities and tourism forms, test their relationship with tourist psychological well-being, and compare the weight of each form on tourist psychological well-being. Another suggestion for future studies is to validate the scale in other cultures and compare different cultural contexts to understand the effects of culture on the psychological well-being of tourists. It would also be beneficial to explore the long-term effects of tourism on psychological well-being using longitudinal designs.

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